

# Memorandum

## Environmental Health and Safety

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TO: Grant Osburn, Plant Team Lead

FROM: Richard Dalton, WUD Safety/Training Coordinator  
Raymond Hagen, Hazmat/Safety Specialist

CC: Oliver Ncumbe, WUD Deputy Manager  
Mike Bershad, Plant Operations Administrator  
David Tavares, Hazardous Materials Supervisor  
Scott Mosley, Hearing Conservation Program Administrator  
Holly Bushaw, WUD Safety/Training Coordinator

DATE: **August 17, 2006**

**SUBJECT: HEARING CONSERVATION – EMPLOYEE NOTIFICATION**

This memo and attached documentation is to notify you that noise monitoring was performed in accordance with OSHA Technician Manual (TED 01-00-015 [TED 1-0.15A]) Chapter 3, Section 3, evaluation of noise exposures. On August 16, 2006 a walk around survey was completed by the Environmental, Health and Safety Group (EHS) to measure the duration and intensity of occupational noise that employees at the Johnny G. Martinez Water Treatment Plant Facility (JGMWTP) are exposed to on a daily basis.

Attached is the Noise Monitoring Survey results and employee notification letter. **All** these documents must be posted for ten **(10)** working days in a prominent area, where **all** employees who work at the JGMWTP have access. Based on the initial monitoring results and subsequent re-monitoring of equipment, your employees will not be included the City of Tempe, Hearing Conservation Program. However, there are specific requirements that employees must follow to ensure that the highest level of hearing protection is maintained. These requirements are included with the attached Noise Monitoring Report.

If you have any questions about the monitoring, hearing protective devices, placement of sign(s), or wish to have additional monitoring performed, please contact Program Administrator, Scott Mosley at 350-8877.

**Note:** *Individuals who work with the stand-by plant generators, such as mechanics, electricians etc. are covered by this program. They were included in the program after initial monitoring and notification which occurred in 2004.*

**POST FOR TEN WORKING DAYS**

# City of Tempe

## Hearing Conservation Notification

This letter serves to notify you that noise monitoring was performed to measure the duration and intensity of occupational noise in your work environment (See Attached Noise Monitoring Survey). The results were compared to allowable exposure standards called PELs (Permissible Exposure Limits) established by OSHA. This PEL is calculated on a Time Weighted Average (TWA) over a normal 8-hour work shift. The results indicated that you **do not** exceed the PEL/TWA. Therefore, operations staff members are **not** covered by the City of Tempe, Hearing Conservation Program.

However, the occupational noise level measured, **do require** that you wear hearing protection devices (HPD) as a form of Personal Protective Equipment (PPE). The use of HPD's provides an additional protective barrier between you and potentially high noise levels.

If you have any questions about monitoring, other requirements identified or wish to have additional monitoring performed, please contact 350-8877 or 350-2818.

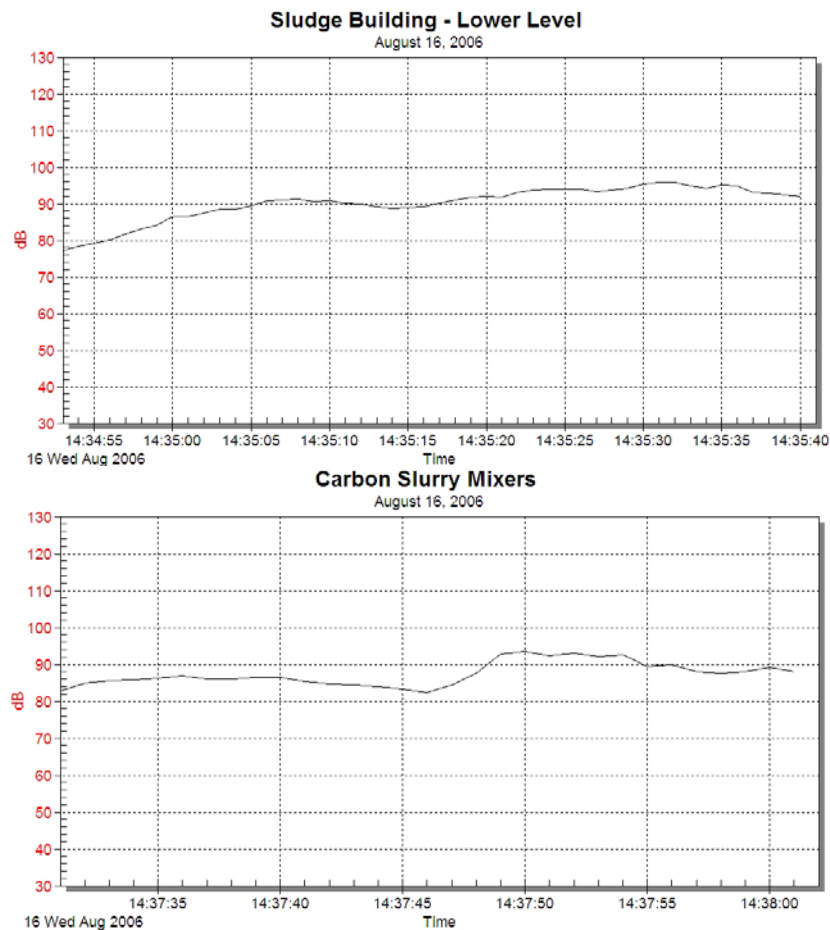
POST FOR TEN WORKING DAYS

## Monitoring Synopsis

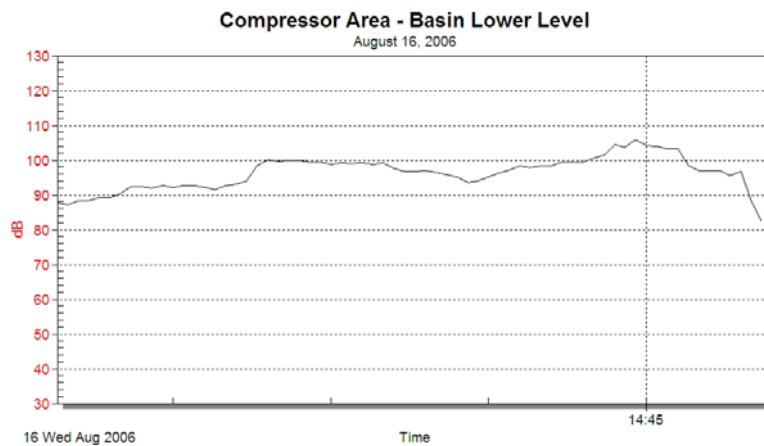
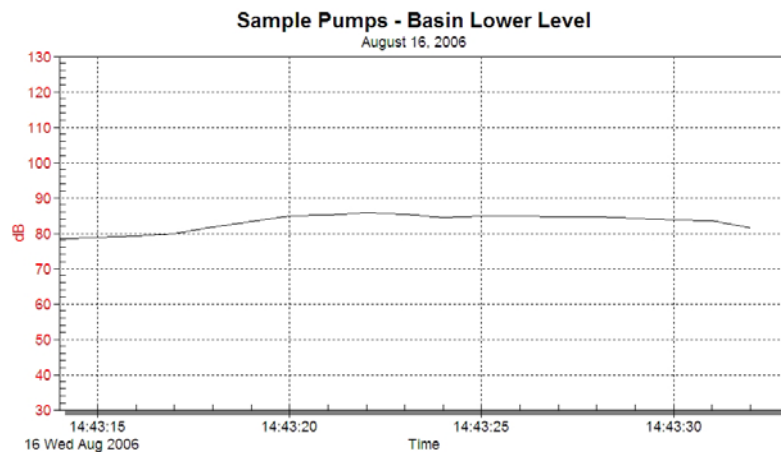
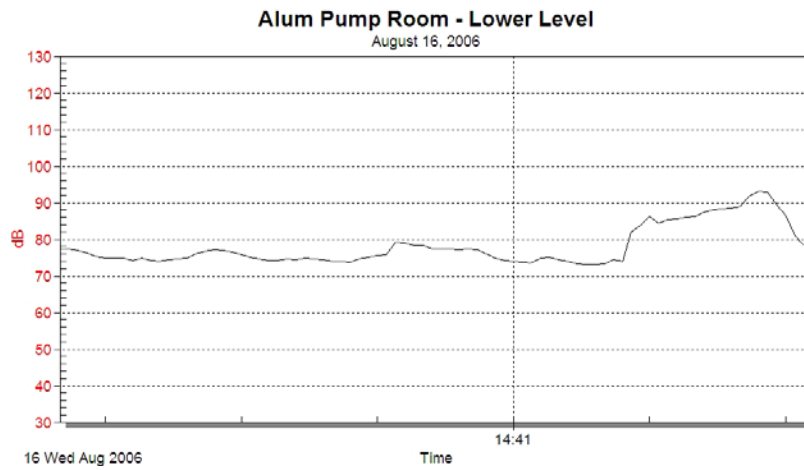
The sound meter used to perform monitoring was a Type 2 meter with data logging abilities and a frequency range of 31.5Hz ~ 8KHz. The measuring level range is 30 ~ 130dB in the "A" frequency rating. Accuracy is approximately +/- 1.5 dB. The meter was calibrated per manufactures recommendations using a standard Acoustic Calibrator (94 dB) at the start and end of monitoring and was found to be within the acceptable ranges.

There are five noise monitoring graphs that are attached of equipment that was identified in the 2004 survey and additional equipment identified by the Plant Team Lead during this walk around survey. When screening for noise exposures, sound level meter measurements and estimates of the duration of exposure are sufficient. The resulting spot readings can be used to determine the need for a more complete evaluation. Based on this monitoring event, no additional monitoring is required to establish the need for employees to remain in the Hearing Conservation Program.

Calculation of the Time Weighted Average (TWA) is extremely difficult to determine based on numerous and varied tasks performed by individual Equipment Management personnel throughout each day.



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## Findings

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The following areas were monitored with the peak dBA indicated.

<b>Area/Equipment</b>	<b>Peak dBA</b>	<b>Area/Equipment</b>	<b>Peak dBA</b>
Sludge Building (Compressor)	95.9	Sample Pumps (Basin Lower Level)	85.8
Carbon Slurry Mixers	93.5	Compressor (Under Filters)	105.7
Alum Pump Room (With Compressors on)	93.1		

As addressed previously additional monitoring will not be required to establish the need for employees to be included in the Hearing Conservation Program and the Time Weighted Average (TWA) for each piece of equipment was not established. Employees are not subjected to equipment identified with decibel readings above 100 than 0.5 hours per day. Based on the employees time of use and equipment decibel readings these operations are under the level identified in §1910.95 (c) and are therefore not required to be included in the City of Tempe Hearing conservation program.

Based on CFR 29 1910.95, Occupational Noise Exposure, Appendix A, Noise Exposure Computation and the established 0.5-Hours of use per day, employees wearing hearing protection as defined in requirements of this report would be sufficient to comply with the established Time Weighted Average and therefore would not be included in the City of Tempe, Hearing Conservation Program. However, it is very important to note that at no time should any combination of use of high noise equipment exceed 0.5-hours (1/2) by one employee for an eight-hour work day.

Table 1 indicates the duration and sound levels to which employees may be exposed to occupational noise without experiencing hearing loss. Employees must not be exposed to impact noise greater than 140 dBA peak.

<b>PERMISSIBLE NOISE-EXPOSURE REQUIREMENTS</b>		
<b>DURATION (hrs/day)</b>	<b>DOSE (%)</b>	<b>SOUND LEVELS (dBA)</b>
8 **	33	85
8	100	90
6	100	92
4	100	95
3	100	97
2	100	100
1.5	100	102
1	100	105
0.5	100	110
0.33	100	112
0.25	100	115

85 dBA/8 hours = "Action Level" at which a Hearing Conservation Program required.

### **Determination**

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Based on initial monitoring performed in 2004 and subsequent re-monitoring identified in this report, JGWTP Operations staff will **not** be included in the City of Tempe, Hearing Conservation Program.

### **Requirements**

Signs **must** be placed in those areas where high noise equipment is used to notify employees and/or visitors of the presence of high noise areas and/or equipment. Verify that signs are posted near equipment that starts automatically warning of the hazards which also include high noise.

It is the responsibility of Supervisors to properly notify new employees, outside employees or contractors that enter high noise areas of the hazards and required personal protective devices required. The appropriate level of hearing protective device is:

- Any Hearing Protective Device with a minimum NRR value of 29.

Additionally, employees should not be permitted to work continuously in the lower level of the basin near the compressors that are located at the ends of the filter gallery for greater than 0.5-Hours of use per day.

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